

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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## SECURITY INFORMATION

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This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.  
THE APPRAISAL OF CONTENT IS TENTATIVE.  
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LONG-RANGE ROCKETS

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1. [redacted]
- The warheads of the R-10, R-12, and R-14 were constructed in such a way that they only had one stable position. It was assumed that the warheads could re-enter the atmosphere at 80 km altitude with any angle of incidence. Section No. 2 (Aerodynamics) supplied the  $c_w$  values dependent on  $\alpha$ , perhaps based on measurements in the wind tunnel of this section, and also the other necessary aerodynamic data. The oscillations of the angle of incidence decreased quite quickly in all cases. [redacted] do not remember the loss of range anymore, but it was rather small in the case of the "slow" tip of the R-14. [redacted] do not remember details of any of the heating effects caused by re-entry. However, [redacted] the heating effects were not critical for the above-mentioned three rockets.

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CONTROL OF LONG-RANGE ROCKETS DURING FREE FLIGHT

2. Dr. Reichardt did research in the ballistics section on the control of the rocket on the free flight trajectory by electrical path measuring. [redacted]

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[USAF, DIA, review completed.]

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LAUNCHING, STABILITY AND CONTROL OF MULTI-STAGE ROCKETS

3. No exact research was made [redacted] concerning the behavior of rockets after the launching. It was clear that in projects with little starting acceleration (for the R-14,  $\epsilon$  was 1.4) the rocket would strongly pendulate, but the guidance section was of the conviction that gyros would guarantee the proper flying of the rocket and nothing could happen in this respect. 25X1
4. Stability examinations were a matter for the guidance section and were executed [redacted] with the help of a "track model". Dr. HOGER had little inclination for theoretical-mathematical methods. Only for the R-14 did Dr. WOLFF conduct stability research in connection with the examinations of the loads on the rocket because of wind influence. In the case of R-14 these examinations were very important because the pressure center lies, for a long time during flight, ahead of the center of gravity. [redacted] 25X1

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SOVIET OR GERMAN INTEREST IN ARTIFICIAL SATELLITE ROCKETS

5. [redacted] GROETTRUP once mentioned such a project, but no research in this direction was ever done at Ostashkev. 25X1

PERSONNEL WHO WORKED ON THE RHEINTOCHTER OR SCHMETTERLING IN THE USSR

6. Dr. QUESSEL worked until the fall of 1950 in Branch No. 1 on research on the "Schmetterling" and "Rheintochter" missiles, or at least on one of them. He had probably also worked on these rockets in Plant No. 88, Podlipki, before he was transferred to Branch No. 1 [redacted] 25X1

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USE OF THE WASSERFALL AS A LONG-RANGE MISSILE

7. Much later (perhaps in 1951) it was requested, probably by Moscow, whether the Wasserfall could be used as a long range missile. It was also known in 1944 that the plan existed in Germany to use the Wasserfall missile as a substitute for long-range artillery. [redacted] no ballistic calculations in this direction were made in Ostashkev or any other place in the USSR. 25X1

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